

A
Phyfico-Medical
E S S A Y
CONCERNING
ALKALY and ACID,

S O F A R
As they relate to the Cause or Cure of
DISTEMPERS.

W H E R I N
Is endeavored to be prov'd, that *Acids* are not
(as is generally and erroneously suppos'd)
the Cause of all or most Distempers, but
that *Alkalies* are.

W I T H
An Account of som Distempers, and the Me-
dicins, with their Preparations, proper to
be us'd in the Cure of them.

A S A L S O
A Short Digression concerning *Specific Remedies*.

By J O H N C O L B A T C H, a Member
of the College of Physicians.

The Fourth Edition.

L O N D O N,
Printed by J. D. for D. Brown, 1699.

To the Right Honorable
 Sir HENRY BELLASIS,
 Lieutenant-General of His
 Majesty's Forces.

Honored Sir,

Dedications are now so much in fashion, that a Book which appears without one, is scarce look'd upon; People thinking the Author, who omits what is so generally practis'd, is altogether destitute of a Friend capable of protecting and countenancing him; for which reason only, let the merit of the Book be never so great, few will give themselves the trouble of reading more than the Title-page. To prevent which, and thankfully to acknowledg the manifold Favors you have generously confer'd upon me, I have presum'd to prefix your Name to this Essay. I can't flatter my self so far as to think any thing in it worthy to

entertain a Person of your parts : But since it comes from one fill'd with a sense of Gratitude, I have reason to hope it may meet a kind Acceptance ; well knowing that small things have sometimes a Value set upon them, especially when made the Offerings of Respect, Esteem, and Thankfulness. It would be too great an Honor to me to declare how readily you have appear'd to serve me when I stood most in need of your Assistance : For which I can't better express my Gratitude, than by a Silence full of Admiration ; and let me say never so much, I should fall short of my Duty. This Piece is properly Yours, it being under your Umbrage I was inabled to write it. And if, out of your wonted Generosity, you'll be pleased to cast a favorable Aspect upon it, it will afford the greatest Satisfaction to,

Honored S I R,

*Your most oblig'd
and obedient Servant,*

JOHN COLBATCH.

The PREFACE.

IT may be much wonder'd, that I should in the least presume to meddle with this Subject, which has already bin handled by so many Great Men. But when it shall be considered, in how different a manner I have treated upon it from what has bin hitherto don, I question not, but by the generality of Mankind I shall be very easily excused: And tho there may be many imperfections in it, yet when my Design (which is to undeceive people in a matter, on which depends the Health and Welfare of all) shall be well weigh'd, I doubt not but by the candidly Ingenuous it will be well approved; tho I expect to meet with a great number of Carpers, especially among those, who by long custom, and for want of due Consideration, have embraced a contrary Opinion.

It is scarce possible for a Man to converse with Persons that are ill, let the Distemper be what it will, especially such as have any smattering in Physic, which most now a days have, but they presently tell you, their Blood is so very acid, that unless the Acidity can be corrected, it is impossible for 'em to be well: And accordingly they fly to Alkalious Medicins, as Pouder of Pearl, Coral, Crabs eyes, or something of that nature: and if they send for a Physician, which few do, especially in Chronical Cases, till they have first used a vast Farrago of Alkalious Medicins, and be
chances

chances to take the same Method with themselves, they presently cry out, We have already taken such vast quantities of the foresaid Medicins, that unless you can think of more generous and efficacious Alkalies, the Acids complain'd of will not be mortified. This has put men to great shifts, either to find out new, or to disguise the old ones: and after all, the Patients Expectation has bin frustrated, their Distempers not being to be cured by such Medicins; but on the contrary either exasperated, or so confirmed, that they will scarce admit of a Cure at all, especially if the Distemper be Chronical.

I must confess, I was formerly a Stickler for Alkalies (being carried away by the common Vogue of Mankind) and seeing the insufficiency of common ones, did put my self to great expence, besides a vast deal of trouble, to volatilize Salt of Tartar, &c. till at last I was fully satisfied, by daily observation, that Alkalies, tho never so exalted, would do me very little, if any service at all in the cure of most Distempers.

There are som particular Preparations of Steel and Antimony, of som of which I have given an account; which using as Alkalies, as they are generally believ'd to be, did me great service. But since I have well examined 'em, instead of Alkalies, I find 'em to be most noble Acids, and the Distempers cur'd by 'em did not (as I formerly supposed) proceed from an abundance of Acid Particles in the Blood or Juices;

The Preface.

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ces; but on the contrary from Alkalious ones, as I suppose most Distempers do, and as I have endeavored to make appear by many Observations.

I expect many will cry out, as some have already don, That this Man was bred an Apothecary; and shall he pretend to be a Reformer in Physic and Surgery?

To which I answer, That I own my self to have bin an Apothecary, and bred up under a Man (tho otherwise very honest and just) that was not the greatest Master in his Business. Taking notice of his Imperfections, I applied my self for four Years of my time to diligent Study, in order to attain those things I was sensible he could not teach me. And after I had well considered, and in some measure become a Master in Pharmacy, which is the Foundation on which the Practice of Physic is built, I was induced to look into the Body of Physic it self; and tho I don't pretend to absolute Mastership, yet I shall endeavor, and think my self obliged in Duty both to God and Man, to improve my small Talent to the best advantage I can, let Carpers say what they will.

The greatest part of my time I lived in Worcester; and tho I kept an Apothecaries Shop, yet my Dependence was wholly on my own Practice, the Success I had in which is sufficiently known in that Country. And for a Character, I desire no other than the generality of those People will give me, of whom I know no one that can or will speak amiss of me for any thing, but my coming
away

away from them, and leaving such flourishing, thriving Business as scarce any of my Age ever had before; for which many of them have blam'd me: but the Reasons of my leaving that Place are best known to my self; nay, are now in some measure evident to the World.

And since I have bin speaking of my being bred an Apothecary, I shall enlarge a little on that Subject, giving a short account of the necessary Qualifications of one of that Profession; and then leave every body to judg whether a Man so qualified has not made a large step towards being a good Physician.

First, An Apothecary must be well acquainted with the Vegetable Kingdom, not only to know the faces of Plants, but their Natures, and manner of Operation on Human Bodies: Can he otherwise tell how to handle them, so as to make his Compositions as they ought to be? And indeed every Physician supposes the Apothecary so qualified, when he prescribes to his Shop; for in his Bill he seldom directs the Method of making his Medicins, but only orders such and such Medicins; knowing, or at least supposing him (for every Physician ought to be well satisfied in the Abilities of his Apothecary) to be before hand skilfully prepar'd. For let a Physician prescribe like an Angel, if the Apothecary thro Ignorance be destitute of good and well prepared Medicins, both Physician and Patient are frustrated in their Expectations, which I am afraid too frequently happens.

Secondly,

Secondly, He must well understand the Nature and Operation of Minerals and Metals, which is not to be learnt in the Dispensatory, nor any other way to be attain'd, but by much reading, and hard labor in the Fire.

Thirdly, He must understand the Nature of Animal Bodies 'also, among which is comprehended that of Man, of whose Body there is scarce a Part, but is sometime or other to be used as Medicin: yet before it is used, the Apothecary's Skill is for the most part required for its Preparation, in order to which he ought first very well to understand its Nature.

With all the foresaid Qualifications, and many more, are multitudes of Apothecaries in England endow'd. And to the Honor of the Apothecaries of London be it spoken, I have generally found the meanest Shops in this eminent City better fraited with good Medicins, than the most eminent in all Holland, or the rest of the Low-Countries.

I might add much more on behalf of that noble Profession; which tho I have left off, yet still I have a high value for it, and think an honest and skilful Apothecary as serviceable in the Commonwealth, and to deserve as much Incongruement as any man whatever.

The Famous Etmuller was not asham'd to own, he serv'd 8 Tears to an Apothecary; for all which he was afterwards one of the eminentest Physicians of Europe: And for ought I know, the loss of him at the Age he died, from whom so much might

might rationally have bin expected, deserves as much to be lamented, especially by Physicians, as the loss of any one privat Man.

And here let me lament the great misfortune under which the Commonwealth of Physic at this time labors, viz. the great Breach between Physicians and Apothecaries, or at least a great number of both Professions; which, unless som Method be found amicably to compose it, and to establish the antient Friendship and Correspondence between the two Professions, will be such an Opportunity to the Quacks, that in time they will destroy both Professions, and have liberty to injure Mankind without controul.

I believe there are more strowling Quacks in this Nation than in all Europe besides, who have nothing to recommend them but their Impudence: and the Common People who are not Judges, are easily imposed on by them; yea, 'tis daily seen, that on the Ruin of Families many of them raise considerable Fortunes, and make a Figure in the World.

Now the only Method I can propose to suppress these Swarms of Caterpillars, is a hearty Union between the College of Physicians, and the Company of Apothecaries; for want of which Mankind daily suffers detriment.

I have not given a full account of those Distempers I treat of, but only som short hints so far as was necessary to clear my way.

In the following Essay there are Remarks on the Practice of som particular Men only, my Design

sign not being in the least to reflect on that Noble Society, or any Member of them, I mean the College of Physicians, whom I own to be the Glory of our Nation, and of the whole World, and for whom I have the greatest Reverence and Respect imaginable. And since I had the Honor to be admitted into their number, and thereby of having more intimate converse with them, I see more cause to esteem and respect them every day.

I pretend not to be the sole Author, or first Broacher of this Doctrin of Acids in the cure of Distempers, it having long since bin the Opinion of som of the most happy Practitioners in the World, and is at this time imbraced by as great Men as perhaps our Age affords.

I wrote this Essay at a place (during the first three Weeks of the Siege of the Castle of Namur, when we had not many wounded Men brought to our Field-Hospital) where I had not the opportunity of consulting Books, nor the benefit of coming at my own Papers, wherein I had set down my Observations on this Subject: For want of which I have only us'd such as occur'd to Memory, whereby they are not so numerous nor exact as I design'd them: But however, for som reasons I am willing to venture them abroad as they are, they not being in the least designed to entertain the Learned, but to undeceive the Multitude.

I don't pretend to be so great, nor to deserve so well of Mankind as Helmont, Paracelsus, &c. yet they going out of the common Paths, and acting on different Principles from the rest of Mankind,

kind, did not want such as maligned them, and used allopprobrious Language against them. Therefore why should I, who have not in the least arrived to those great Perfections that they had, take it amiss to be abused and evil spoken of?

[I must confess I have differed from the forementioned great Men in this, viz. that I have deliver'd my Mind in so clear a manner, that all might understand what I write; whereas they endeavored to conceal many great things even from their dearest Friends and Relations, whereby the World is now deprived of som Medicins that might have bin of great advantage to the diseased part of Mankind.]

Authority has in great measure blinded som Mens Understandings, and seal'd up their Eyes: There being still som that pay too submissive a Deference to antient Opinions, tho never so contrary to Reason, and will not open their Eyes to see the Truth. There are still Men who write against most known Truths, as the Gravity and Elastic force of the Air, and other such things. This Doctrin of Acids, and that I formerly wrote concerning the Cure of Wounds, are likewise of the number of those that are unfortunate, merely for not being born old, and with a venerable Beard.

When a Book (says the famous Malbranch) is first to appear in the World, we know not whom to consult to know its Destiny: The Stars preside not over its Nativity; their Influences have no operation on it, and the most confident Astrologers

logers dare not foretel the divers Risks of Fortune it must run. Truth not being of this World, Celestial Bodies have no power over it; and wheras it is of a spiritual Nature, the several Positions or Combinations of Matter can contribute nothing either to its Establishment or Ruin. Besides, Mens Judgments are so different in respect of the same things, that we can never more hazardously and imprudently play the Prophet, than in presaging the happy or unfortunate Success of a Book. So that he who ventures to be an Author, lays himself at the Reader's Mercy, to make him what he pleases. But of all Authors, those who encounter with Prejudices, ought infallibly to reckon upon their Condemnation. Their Works sit too uneasy upon most mens Minds; and if they escape the Passions of their Enemies (which I have not) they are obliged to the almighty force of Truth for their protection.

However, time will do every man Justice; and Truth, which at first appeared a chimerical and ridiculous Phantasm, by degrees grows sensible and manifest. Men open their Eyes, and contemplate it; they discover its Charms, and fall in love with it.

The Books that encounter with Prejudices, leading to Truths thro' crooked Paths, require a longer time than others to obtain the Reputation their Authors expect. As I find it too true, that all those Writers who combat with Prejudices, are much mistaken, if they think thereby to recommend themselves to the Favor and Esteem of others.

Possibly a few will speak honorably of them when dead. But while living, they must expect to be neglected (I speak experimentally) by most people, and despised, reviled, and persecuted even by such as go for the wisest and most moderate men. There is nothing but Truth contain'd in my *Novum Lumen Chirurgicum*; and I thought I should have bin in a condition this Summer to have made it evidently appear. But instead of that, I have bin abused and delivered up into the hands of my Enemies, to do with me as they pleas'd.

My *Novum Lumen* is built on a pair of Medicins, which as yet I think not fit to make public; but here lies my misfortune common to all those who make new Discoveries: A great many believe the truth of what I have said, and that my Medicins are capable of performing what I have promised. But among those who are so ingenuous as to believe matter of Fact, many say, this Man was not the Author; others, that they have the same Medicins; and som, that they imparted them to me. As for these Gentlemen, I can easily excuse them, well knowing it is the nature of most Men not to allow any Person the honor of his own Discoveries, thinking thereby their own Glory eclipsed. But there are another sort, whose Interest will not let them embrace the Truth, and for that reason do what in them lies to keep others from so doing. And the greatest part of Mankind not being Judges in my Cause any further than their Eyes direct them, it is altogether impossible there should be many Spectators, by which means

means I am evil spoken of by many, because an interested Party has told them I have pretended to what I can't perform.

I expect the Mouths of my Enemies will be opened wide against me; but I have already born so much, that I can contentedly suffer the greatest Indignities that may be offer'd: My great Satisfaction being that I have Peace in my own Mind, having propos'd nothing but what tended to the good of Mankind; and well knowing, that if my Medicins are faithfully and skilfully used, they are capable of performing much more than I have promised for them; but the best Medicins unskilfully used, or by prejudiced Persons, with a design they should not succeed, may be brought into disgrace.

The following Essay I humbly offer to the candid Reader's Consideration, not doubting it will meet with a favorable reception. I must needs say, I more value the good Word and Opinion of one candidly ingenuous, than all that can be said by ten thousand clamorous, ill natur'd Persons. I have endeavored to act so, as to deserve no Man's ill Word; but if I am abused, and my Undertakings misrepresented without just cause, I shall never break my Heart about it, being assur'd the Justice and Integrity of my Undertakings will one time or other appear.

There being a great Call for this little Tract, and the former Impressions being quite sold off, at the request of my Bookseller I have suffered this third Edition to com abroad: The Additions I

have made are not many, tho I could have added much more; but the Bookseller designing to print this and som other Tracts together, if I should have added much, it would have swelled to a larger Extent than is designed.

Were I satisfied that any one thing I have advanced either in this, or my other Tracts, did in the least tend to the prejudice of Mankind, the first thing I went about should be to recant, and beg pardon of the World: but instead of that, I am daily more satisfied and confirmed in the truth of my Hypothesis, both by the Success attending my own Practice, and the concurrent Testimony of Multitudes of Practitioners from most parts of England, who have bin so generous as to return me Thanks for making them sensible of their Errors, and setting them on a right Bottom, wherby they are capable of acting with som Certainty, which before they could not do: For whose sake, tho I meet with never so much Opposition from others, I will spare no pains to make things yet more clear.

*From my House in Villers-
street, York Buildings.*

A

Phyfico-Medical

E S S A Y, &c.

C H A P. I.

Of the Small Pox.

THE first thing I shall begin with, is the Disuse of *Alkalies* in the *Small-Pox*, that fatal Distemper to three Kingdoms, and even all *Europe*; in that God was pleased thereby to deprive us of a Princess, whose Worth was such, that a sufficient Value can never be set upon it, nor her Loss be enough lamented.

It is common both with Nurses and the generality of Practitioners, as soon as they perceive the least Symtoms of this Distemper, to give *Gascoin's*, *Countess of Kent's*, *Lapis de Goa*, or som other *Testaceous* Pouder, which are known *Alkalies*. The one Party pretend thereby to drive the Malignity from the Heart; the other to correct the Acidity which they conjecture (beyond which they can't go) to be in the Blood.

In the subsequent Discourse, I shall endeavor to shew on what false Suppositions both Parties go.

For the first sort it will not be worth while to spend much time, because every one will readily grant, they generally act on wrong and mistaken Notions. And as for any Malignity lodg'd in the Heart more than in any other part, 'tis altogether impossible, by reason the Blood moves ten times at least faster thro the Heart than any other part, the Lungs excepted: And the Cavities being large, no *Stagnation* is to be feared, and consequently no danger. If there be any fear of the Malignity's settling any where, it must be in those parts where the Vessels are very small, and the Blood moves but slowly, which must be near the extreme Parts.

For the second sort, who give the same Medicins, but with quite different Intentions; I shall endeavor to prove, that their Suppositions are altogether as groundless as the former. They give their *Alkalious* Medicins to correct the *Acidity* they suppose to be in the Blood, which is, as they pretend, the occasion of all the ill Symtoms that attend the Small-Pox. Now I could never hear of any one, that by analyzing the Blood of Persons in the Small-Pox, could ever find the least Footsteps of Acidity in it; tho, on the contrary, it appears after many Trials, that the Blood of such a bounds more with Alkalious Particles than that

of sound People: and consequently, the giving Alkalies in this case must be at least superfluous, if not highly pernicious, as I have frequently observ'd, and shall instance in som Particulars.

The cause of the Small-Pox, common with most other Fevers and acute Distempers, I suppose to be from a quantity of such Particles being som way or other admitted into the Blood, which being of a quite different Texture from the Blood, and so not capable of mixing with it, cause a hurry and disorder there; which is what I * elsewhere observe to be the occasion of both continued

**Nov.Lum.
Chir.*

and Symtomatic Fevers. Now it is well known a Fever always precedes the Eruption of the Pustles in the Small-Pox: And when the Pustles are well com out, that is, when the heterogeneous Particles, or such as are of a different Texture from those of the Blood, are thrown out to the Surface of the Body, the Fever ceases.

Now to assist Nature in throwing those heterogeneous Particles out of the Blood to the extreme Parts, which they pretend to be mightily hinder'd by a great quantity of Acids in the Blood, they give repeated and large quantities of Testaceous Alkalious Pouders, and other *Diaphoretics*; which indeed seldom fail of answering their Intentions, in throwing out large quantities of Pustles, even more than Nature is able to supply or bring to maturity;

and if the chances to cope with 'em, 'tis the only occasion of spoiling so many Angelic Faces, as we daily observe. But the spoiling of Faces is not all, for besides the throwing out so great a quantity of Pustles by breaking the Globules of the Blood, when brought to the *Cutaneous* Glands, instead of those Glands separating the excrementitious *Serum*, which in a state of Health is all or most part of it carried off by Sweat, or insensible Transpiration, but at this time to supply the Pustles till brought to maturity; I say, by breaking the Globules of the Blood when in its confused state, *Serum* and all together, the excrementitious *Serum* only, according to the Rules of Nature, ought to be separated, those Glands being so many Strainers fitted to receive into them the *Serum* only, and not the least drop of Blood when in its natural State, and its Globules unbroken. I can liken the separation of the *Serum* from the Blood, by the mediation of the cutaneous Glands, to nothing better than a Mixture of Oil and Water, made by continued agitation, when that compound Mixture seems to be one intire white Liquor; tho with good Eyes or a good Glass, the Oil may be seen floating in the Water in small Globules, as the Blood doth in the *Serum*, as I elsewhere * observe:

* *Nov. Lum.*

Yet this Mixture of Oil and Water, let it be don never so exactly, if pour'd into a Funnel lined with brown Paper, wet beforehand, the Pores will be so disposed, as to let

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all the Water run thro, tho not the least Particle of the Oil; yet if there be som Alkalious Salts boil'd with this Mixture of Oil and Water, the Globules of the Oil will be so broken, as to pass readily with the Water thro the brown Paper, which before it would not in the least. In like manner, the Globules of the Blood being broken by the means of Alkalious Medicins, together with too great a quantity of Alkalious Particles being before admitted into, or rather detained in it, are thereby made capable of being received into the cutaneous Glands, which is the only occasion of those purple Spots on the surface of the Skin, not only in the Small-Pox, but other Fevers; which Spots seldom or never fail of being the certain tokens of future Death.

But this is not all, for by the said breaking the Globules of the Blood by Alkalious Medicins, these small broken Globules getting into the little Meanders of the Brain, hinder the Motion of the Animal Spirits thro the Nerves, and so cause Deliriums, and all those fatal Disorders of the Brain too frequently seen.

Likewise the Blood, which is not capable of being contained in its proper Channels, is the occasion of violent Bleeding at the Nose, bloody Urin, &c. which are none of the best Symtoms, but what too often happen by the said means.

Besides breaking the Globules of the Blood, and causing the foresaid ill Symtoms, with many

many others I don't think fit to enumerat; by their Diaphoretic Quality there is so great a waste made of the Serum of the Blood, that there is not a sufficient quantity left to supply and bring to maturity those many Pustles (even more than Nature designed) that these Medicins alone had thrown out: So that about the ninth, eleventh, or thirteenth day, for want of a sufficient quantity of Serum to supply them, the Pustles fall, and the acrid corrosive Matter being absorbed into the Blood, causes secondary Fevers, which oftentimes prove very dangerous. I might expatiate much more, but I design brevity.

It may be said I have gon far enough in condemning the ordinary Practice as to the use of Alkalies and Diaphoretics, not having substituted a better and safer Method and Medicins in their room: but not too fast, that follows in its proper place.

The Small-Pox is a Distemper that requires the giving of as few Medicins as any Distemper whatever, unless in som extraordinary Cases; but yet I think it most unreasonable, that People (as is the common practice) should be left to the sole management of old Women and Nurses; which alone I verily believe has destroy'd more than the Sword it self. And tho but a few Medicins, as I said before, are generally necessary, yet the Ey of a careful, skilful Physician, and that from the beginning, is as convenient as in any Distemper
what-

whatever, that seeing Nature's Operations, he may also observe the fit time to give the Medicins requisit. I confess I have heard some complain that such a Physician has had so many Fees, and never wrote one Bill for them. For such People, let me tell them, they complain without cause: for in many cases, especially in this, the Physician deserves his Fees better for not writing at all, than otherwise.

I own my self a profest Chymist, and in many things, tho not all, a Disciple of *Helmont*, and know nothing so delightful to me, as Chymical Operations: Yet in this case, nor indeed scarce in any acute Distemper, do I judg Chymical Medicins, at least the elaborate ones, to be absolutely necessary, tho many of them may do well, and are sometimes to be used: But I know no reason to fly to elaborate Preparations, when Nature has provided Medicins ready to our hands. Acids skilfully and timely given, I have seen, not only by my own, but by several Great Mens Practice, to be the only safe, effectual, and seldom or never erring Medicins in this Distemper; and why should we fly to Acids chymically prepared, when, as I said before, Nature has provided Oranges, Lemons, Citrons, Limes, and a great many more not necessary to mention, which for the most part answer our intentions, if skilfully given by an experienced hand? And as I hope I have shewn sufficient

ent Reasons to dissuade from the use of *Alkalies* and *Diaphoretics*, from the many direful effects that daily attend their use; so I hope to give as cogent ones to inforce the use of *Acids*, from the laudable, good effects I have seen from them: for in at least five hundred Patients that I have had of all Qualities to do with in this Distemper, in *Worcester* and *London*, to the Year 1695, when called in at the beginning of the Distemper, I know not that I have had one that has died, or bin disfigur'd; nay som that were brought into very ill circumstances by the use of Testaceous, Alkalious Pouders and Diaphoretics, I have retriev'd from the jaws of impending Death by fit and proper Acids.

[And in the Small-Pox that has raged during this present Year 98, I have not lost above three Patients, and the occasion of their Deaths, as I have all the reason in the World to believe, proceeded from Irregularities committed by their Friends before I was called in, *viz.* their giving them sweating Medicins upon their first being taken ill, which I earnestly caution all People against, as a thing that frequently proves fatal, as it also dos during the whole Course of the Distemper. But further, why should Diaphoretics be given at first to hasten the eruption of the Pustles, when it is evident to all cautious, observing Practitioners, that the only dangerous Small Pox is that where the Pustles appear within a day or two after

after the Patient is taken ill; whereas those that are four, five or six days before they appear, are generally free from all ill Symtoms? Therefore if we would imitate Nature in her regular operations, we should rather moderate, than rashly push forward the eruption of the Pustles.]

It may be wonder'd at that I make a difference between *Testaceous* Pouders and *Diaphoretics*, when the Testaceous, especially the compound ones, as *Gascoin's*, *Countess of Kent's*, *Lapis de Goa*, &c. are accounted Diaphoretics, and indeed are so: but my reason is, because for the most part, besides the said Alkalious Pouders, other more forcible Diaphoretics are also given.

Having in short given som hints concerning the cause of the Small-Pox, I need not again repeat them, but shall immediatly proceed to the method I take in the cure of it, which being according to Nature's dictates, is short and easy: For Nature in performing her Operations makes short and easy cuts; it being in the cure of Diseases, as in finding out and giving an account of the *Phenomena* of Nature by Philosophical Disquisitions, they that go upon the fewest Principles, generally discover most of her Secrets, and are capable of giving the best and most rational account of them; whereas they that are clog'd with multiplicity of Principles, and wander in tedious and uncouth Paths, thinking thereby to get admission
into

into Nature's Cabinet, after they have spent much time, and taken a great deal of pains, at last sit down as wise as when they began, and not one jot wiser.

First, when I com to a Patient who has the Symtoms of the Small-Pox, which are so well known even to Nurses, that I need not spend any time about them: In the first place, if there be any manifest signs of the Stomach's being oppress'd and clog'd with viscous Matter, as generally it is, I give a gentle, easy Vomit, sutable to the age and constitution of the Patient; and after that has don operating, som *Syrupus à Meconio*, or any other proper Opiat in due proportion. Afterwards, to allay the disorder in the Blood, occasioned by the introduction of Heterogeneous Particles, which Nature endeavors to throw out; and to confirm the Texture of the Blood, so as to inable it to rid it self of its Enemy, I give large quantities of any of the following Juleps.

℞ *Succi Aurantior. Unc. sex,*
Aq. Hordei lib. duas,
Sacchari Albi q. s. ad gratam saporem.
M. f. Julap. Vel

℞ *Succi Limon. Unc. quatuor,*
Aq. Hordei ℥ duas.
Cinnamomi Fortis Unc. semis,
Syr. E Rubo Idae Unc. tres.
M. f. Julap. Vel

℞ *Aq. font.* ℥ *unam semis,*
Vini Rub. ℥ *semis,*
Syr. E Rubo Ideo. ℥ *iii.*

M. f. Julap. Vel

℞ *Aq. Cinnamomi Hord.* ℥ *ii.*
Succi Limon. Unc. quatuor,
Syrup. de Succo Lujulae Unc. tres.

M. f. Julap.

Of any of these Juleps I let my Patients drink as oft and as freely as they will; drinking likewise small Beer with Juice of Oranges in it, in as large quantities as they please: But during the whole course of the Distemper; all sorts of Flesh ought to be avoided.

To poor people, instead of the said Juleps, and to save charges, I order large quantities of small Beer, acidulated with Oil of Vitriol, or else Vinegar, or Verjuice Posset-drink, to be drank frequently, and in large quantities.

But if in the beginning, or afterwards, the Brain be much disturbed, and the Patient delirious, for the most part I find it absolutely necessary to let Blood, and that in a good quantity; and then to use more powerful Acids, giving the following Juleps in large quantities; which presently calm the violent Motion and Agitation of the Blood and Spirits, and set all to rights in a small time.

℞ *Aq. Cinnamomi* Hord. ℥ unam,
Syrup. de Rubo Ideo Unc. unam sem.
Sp. Vitrioli Volat. Drach. sem.
M. f. Julap. Vel

℞ *Aq. Cinnamomi* Hord. ℥ unam,
Syr. de Rubo Ideo Unc. unam. sem.
Gas Sulphuris q. s. ad acidum Saporem.
M. f. Julap. Vel

℞ *Aq. Hordei* ℥ duas,
Epidem. Unc. duas,
Syr. Lujule Unc. tres,
Sp. Nitri, vel Vitrioli Dul. scrupulos duos.
M. f. Julap. Vel

℞ *Flor. Rosarum Rub.* Drac. sex,
Aq. Fontan. Bullientis ℥ duas,
stent in infusione in Vase vitreo clauso per
quadrantem horæ, postea affunde Ol. Vi-
trioli vel Sulphuris per Campan. Scrupulos
duos: macerantur per alterum quadrantem
horæ, & coletur, colaturæ claræ adde
Sacchari albissimi q. s. ad gratum sapo-
rem.

In all the Liqueur they drink, I order a few drops of *Spiritus Nitri*, or *Oleum Vitrioli dul.*
 If I find my Patient's Spirits languid and low, I give 3 or 4 spoonfuls of the following Cordial at due intervals, especially towards the

the end of the Distemper, when Cordials are most wanted.

℞ *Aq. Mirabilis,*
Epidem. ana Unc. tres.
Spirit. Citri Unc. sem.
Aq. Melissæ Unc. octo.
Syr. Garrioph. Unc. unam sem.
M. f. Julap. Cardiacum.

[Where there are any Symtoms of what is commonly called *Malignity*, I give either of the following Medicins during the whole course of the Distemper.

℞ *Rad. Angelicæ Hispan. ʒ i.*
Fol. Rutæ,
Scordii ana M. ʒ.
Vini albi,
Aceti Acerrimi, ana Unc. sex.
Infunde clausè & calidè in Vase vitreo vel ter-
reo per horas tres, & coletur, colaturæ cap. Coch-
learia sex quartâ vel sextâ quâq; horâ. Vel

℞ *Aq. Theriacalis Unc. quatuor vel sex,*
Aq. Rutæ Unc. sex,
Syr. Lujulæ Unc. unam.
M. f. mixtura in quatuor partes æquales distrib.
quarum cap. unam quartâ vel sextâ quâq; horâ.

They may also take 10 or 15 drops of my Elixir of *Vitriol* three or four times a day in any convenient Vehicle. H If

If they are subject to be loose, I give the quantity of a Nutmeg of Conserve of *Storrs*, a little aromatized with Oil of Cinnamon, once in two or three hours, ordering them to drink afterwards a Draught of Tincture of Roses.

By this Method I have brought my Patients thro the Distemper, without scarce so much as any uneasiness, or being confin'd to their Beds, or the least fear of a secondary Fever, which frequently proves most fatal.

After the Pustles are quite gon, I take care to purge 'em well five or six times with gentle and easy Purges, after each Purge giving a *Hypnottic*. After I have don Purging, for som time I give corroborating, strengthening Medicins, to confirm the Texture of the Blood and Juices, and bring them to their natural State, wherby I prevent ill accidents, that somtimes succeed the Small-Pox.

I have not given a full History of this Distemper, that being contrary to my design, but endeavored to deter People from the use of such Methods and Medicins as have prov'd fatal to many, and to advance a better and safer Method in their room; yet I would not have people wholly rely on the Method here set down, but always have a Physician by to obviate any unusual Symtoms that may appear contrary to what generally dos; and where Life lies at stake, people can't be too cautious: But if the good old Women and Nurses, in spite of all
that

that can be said, will be still tampering, I must needs say, if my Method be exactly follow'd, I verily believe there would not one in ten die that have formerly by the use of *Alkalies* and *Diaphoretics*.

As I have before exploded the use of *Alkalies*, and given my Reasons for it; so I shall now give som Reasons for the Method I take with the great use of *Acids* in this case.

I judg the cause of the Small-Pox, as I before observ'd, to be from an intromission of Heterogeneous, or Particles of a different Nature and Texture from the Blood, into it; wherby it is put into a great hurry and disorder, in order to throw off its enemy; and that the place, by which Nature designs the discharge of these Particles, is the cutaneous Glands. Now the Inconveniencies I observed to attend the use of *Alkalies*, were the throwing out of more Pustles than Nature intended, the destroying of the Globules of the Blood, and a waste of too great a quantity of Serum. I before forgot to mention one dismal effect of *Alkalies* and *Diaphoretics*, viz. that by destroying or breaking the Globules of the Blood, instead of regular Pustles being thrown out to the Surface of the Skin, the divided broken Globules are together with the morbid matter thrown out, as in the — and so causes an *Erisipelas* or St. *Anthony's* Fire, which seldom or never fails of proving fatal.

Now I defy any one to say he ever observed such Symtoms as these, when Acids were us'd from the beginning, which are of that nature as to confirm the Texture of the Blood, which is that red substance wherin is contain'd the

*Nov. Lum.
Chir.

Byolycnium * or Lamp of Life; and by so doing Nature is capable of throwing out the extraneous Particles in a sutable way, without the inconveniences that attend the other Method: For the Texture of the Blood being confirm'd, and moving regularly and naturally in its proper Channels, the morbific Particles are only thrown out, and such a quantity of Serum left as is sufficient to supply the Pustles, and bring them to maturity without any fear of their flatning, or the acrid Matter being again absorb'd into the Blood, and causing secondary Fevers. Besides, the Globules of the Blood being kept together unbroken, there is no danger of their being extravasated, and causing the fatal *Purple Spots*; nor of being thrown out together with the morbific Matter, and so causing an *Erisipelas* or St. *Anthony's Fire*; neither are *Hemorrhagies*, at the Nose, bloody Water, &c. in the least to be feared; nor, by being admitted into the small Meanders of the Brain, to cause Deliriums, and those other Symtoms that attend it.

I might expatiate on continued Fevers, and other acute Distempers; but that would be to be guilty of Tautology: For I assign but one
general

general Cause of 'em, tho I own the extraneous Particles causing 'em may be somewhat various; and according to the different size of the extraneous Particles, the parts affected may be different; as in the Small-Pox, the size of the Particles are such as to fit them to be thrown out by the cutaneous Glands to the surface of the Skin; in other Fevers they are thrown out, sometimes one way, sometimes another, according to their size. For instance, sometimes they are thrown out by critical Sweating, sometimes by Urin, sometimes by the Glands of the Mouth in spitting, and so on, according to the different disposition of the Particles causing the Distemper, which are fitted to be discharg'd thro the Pores of different Parts; and whatever way we find Nature inclin'd to act, we must assist her in it, but not spur her on, unless she be too sluggish, nor on any account whatever hinder or thwart her in her Operations.

In most continued Fevers we have found Alkalies as pernicious as in the Small-Pox, and Acids as advantageous; of which I shall give an instance or two. •

After I came from *Flanders* in 1694, having discours'd with a certain Physician about a Fever that raged that Summer in *London*, and of which many died; he told me, when he found his Patients under such and such Circumstances, he as much gave them up for dead, as if a Dagger were run thro their Hearts. I

ask'd him what those Symtoms were, that render'd his Patients circumstances to be so dangerous? He replied, When he found them delirious, and had Spasms and Convulsions of the Nerves. I inquir'd of him, what Medicins he gave? He told me, a Composition of *Gascoin's Pouder*, *Virginian Snake-Root*, &c. which he solely relied on, and is the same, or of the like nature with what is generally given. I ask'd him, whether he had never found his Medicin serviceable to him? He ingenuously confest, when his Patients were under those Circumstances, it never did him any service. I again ask'd him, why he did not vary his Method? His Reply was, his Medicin was a most noble *Alkaly* and *Alexipharmic*, and what was generally us'd, and therefore he did not think fit to vary from an establish'd Method.

A few days after I was called in to a Gentlewoman exactly under the same Circumstances before related; she was delirious to the highest degree, had violent Spasms and Convulsions of the Nerves, and all other Symtoms of a Malignant Fever. I despair'd not of her Life; and by the plentiful use of proper Acids, all Symtoms soon vanish'd, and in a week she was fit to go abroad.

Besides, I could instance in a hundred Cases of the same nature, but that I design brevity.

I must own other Distempers may be complicated with the Small-Pox, and other continued Fevers and acute Distempers; or from a different Constitution of the Air, &c. unusual Symtoms may appear; in which cases a general Method must not be relied on, but recourse must be had to proper Specifics.

I have so little reason to recant what I have said concerning the Cure of the Small-Pox and Fevers by Acids, that every day's experience confirms me in the truth of it: and were it not that I design a particular Tract of Fevers, I could expatiate here largely concerning the reasonableness of my Proceedings.

C H A P. II.

Of the Scurvy.

I Now com to treat of the disuse of *Alkalies* in the *Scurvy*, that reigning Distemper, from which few are altogether free; and is by most accounted incurable, or at least for the most part proves so.

But here I expect the cry of all Mankind against me; What! say there is no Acidity in the Blood in the Scurvy? What but an Acidity in the Blood causes the breaking out of Scabs, Pimples, Blotches. &c. on the Skin? What but a Sharpness in the Blood occasions those

dring Pains, and a thousand other Symtoms of which people laboring under this Distemper complain?

My Friends, have patience, and I will presently make it appear, that those Symtoms are not occasion'd by *Acids*, but by *Acrid*, *Lixivious*, *Alkalious* Particles; which I doubt not to evince by plain matter of fact.

First of all, by a Chymical *Analysis* it appears that the Blood of *Scorbutic* Persons has a far greater quantity of Volatile Alkalious Particles, than that of sound Persons; together with som quantity more or less of a Lixivious, fixt Alkaly, of which, for as much as ever I could find, the Blood of sound Persons is altogether destitute.

And by the way let me add this: If Physicians would chymically analyze the Blood of Persons in all Distempers, and make nice Observations of the different Substances obtained from it, the cause of Distempers would be clearly known, and by consequence the cure of them much more certain than now it is. But that I may return to my business.

Another considerable Argument, besides that beforementioned, to prove the Scurvy has its rise from Alkalious Substances in the Blood, and not from Acids, is this which follows.

I have bin frequently told by som Seamen and Surgeons, that have had long Voyages at Sea, especially towards *China* and the *Indies*,
 * that

that of a hundred Men in a Ship, not two of them but have bin almost eaten up with the Scurvy, their Skin squalid and full of Blotches, their Gums eaten away, and their Teeth ready to drop out, Pains and Aches all over their Bodies, &c. and yet on their landing at *Cadiz*, or therabouts, where is plenty of Oranges and Lemons, and eating large quantities of them, in one fortnight's time at farthest scarce one has fail'd of being perfectly cur'd. This is not a Relation of one or two Persons only, but what is generally agreed upon, and allowed by all to be Truth.

Tho these moderat Acids plentifully used may have such effects in that hot Country, yet I have not observ'd that in our cold Climat they have always, always I say, the same effect: because in slight cases they generally do well; yet in more stubborn ones we are forc'd to have recourse to more powerful penetrating ones.

As for Alkalies, I don't believe ever any one was cur'd by 'em of this Distemper; tho I have known som that have taken a vast *Farrago* of Testaceous Pouders, &c. without any good effect, which afterwards has bin don in a little time with a small quantity of proper Acids.

Before I conclude, I shall insert a Preparation of *Antimony*, which I have found of extraordinary use in the most inveterat Scurvies.

Tinctura

Tinctura Antimonii.

℞ *Flor. Albor. Antimonii unc. octo, Spiritus Tartari volatilis ℥ duas, ponantur in Phiolâ vitreâ forti cum Collo oblongo; simul misceantur, & optimè agitantur; postea digerantur leni Calore Balnei per dies quatuordecem, tunc decanta Spiritum rubro colore tinctum a Floribus. Spiritus verò tinctus, e Cucurbitâ vitreâ per Alembicum abstrahendus a Tincturâ, usq; ad medietatem cum igne lenissimo; Tinctura remanens, reservetur in Phiolâ cum obturatorio vitreo optimè clausâ. Spiritus, distillatione abstractus, potest iterum usurpari in eodem negotio.*

Spiritus Tartari volatilis Præparatio.

℞ *Tartari Rhenani purissimi ℥ viginti, colloca in Cucurbitâ ferreâ, cui adaptatur Alembicum aut ferreum aut cupreum; collo Alembici potest applicari Serpens stanneus aut cupreus, collocatus in Dolio aquâ frigidâ repleto: Functura ubivis locorum ritè rectèq; sint munitæ cum optimo Luto; quando Lutum optimè siccat, tunc distilla, primò igne lento, postea fortissimo, & continuatur donec nihil ampliùs elici potest. Spiritus prædictus, ab oleo fatido liberatus, potest misceri*
cum

cum libris tribus Capitis Mortui ad albedinem calcinati, & ad medietatem usque, in Balneo Mariae abstrahere è Cucurbitâ vitreâ per alembicum, quorum juncturae sint ritè munita, & suum retinebit calcinatus Tartarus Fetorem una cum Phlegmate, stillante Spiritus parte solummodo puriore & subtiliore; qui denique cum duabus Capitis Mortui calcinati miscendus, & per Alembicum recentem rectificandus. Atque hic est Spiritus ille Tartari, cum quo prædicta extrahitur Tinctura, & quidem non solum hæc, sed etiam cunctorum Metallorum aliorum, id quod nullus præstare potest alius.

Of the aforesaid Tincture I use to give about four, six, eight or ten Drops, according to the age and strength of my Patients, Morning and Evening, in about half a pint of strong Infusion or Decoction of *Juniper* Berries, without any precedent Purgation; this Medicin performing that Office where there is occasion: it answers every thing generally said of a true *Panacea*, sometimes working by Vomit, sometimes by Stool, and sometimes by Urin, but mostly by a gentle *Diaphoresis* or Sweating. I once knew it to cause a Salivation, without any of the ill Symtoms that usually attend it, when rais'd by Mercurial Medicins. Whoever has a mind to see more of this Tincture, may read *Glauber Op. Mineral. Par. Prim.* from whom

whom I had it, tho I vary something from him. I have found it of great use, not only in the Scurvy, but many other Chronical Distempers, as Rheumatisms, Sciaticas, Dropsies, &c. and by some few Observations I have made, I believe it may do great things even in the Gout it self.

That I may excite People to the use of this noble Medicin, I shall presume to transcribe what *Glauber* declares of it, who I believe has said no more than it deserves.

‘ This noble Tincture of *Antimony* (says
‘ he) above all other Medicins, does wonder-
‘ fully evacuate all vitious Humors, and insen-
‘ sibly purify the impure Blood; it opens
‘ all Obstructions of the Liver, Spleen, Kid-
‘ neys, and all the other *Viscera* of a human
‘ Body, drawing from them all Malignity,
‘ leaving no Impurities there. And because it
‘ purifies the Blood, it cures the Leprosy,
‘ the French Pox, the Scurvy, and all other
‘ Diseases proceeding from the Impurity of the
‘ Blood. By its penetrative and attenuating
‘ Virtue it resolves all Tartarous Humors, and
‘ evacuates those that generat the Gout, and
‘ the Stone in the Kidneys and Bladder.
‘ But it dissolves not *Tartar* perfectly coagulat-
‘ ed, but only mitigates the pain proceeding
‘ from it, and hinders its increase; to wit, at-
‘ tracting and evacuating from all the *Viscera*
‘ both radically and fundamentally that which
‘ is not perfectly indurated and coagulated. It
‘ takes

‘ takes away all Fevers, and other Distempers
‘ proceeding from a superfluity of Humors.
‘ It sweetly evacuates Water contain’d between
‘ the Skin both by Urin and Stool. In short,
‘ it strengthens and purges the principal Parts,
‘ and preserves them from all preternatural Accidents. It is the best Preservative in time
‘ of the Plague, and all other contagious Distempers; and to those that are taken with
‘ any of them, a most excellent curative Remedy, driving out and evacuating the Malignity. In a few words, it is a universal,
‘ and even the best of all Medicins, being most
‘ profitable both for Young and Old, as it is also the most safe; but yet with caution to be
‘ administer’d, by reason of the most potent Qualities with which it is endow’d, it being
‘ as it were a greater Fire extinguishing or
‘ swallowing up a lesser. A better Medicin
‘ than this certainly cannot be desir’d, which
‘ is got out of a mean Subject in a short time,
‘ and with very little charge. I ingenuously
‘ confess I never saw the like, and I doubt not
‘ but it is one of the best of Medicins. Thus far *Glauber* himself, with a great deal more
‘ worth any Man’s reading: *Vid. Op. Mineral.*
part. 1. p. 35, 36, &c.

[I confess since I have left off the preparing my own Medicins, I could never get this Tincture so made as in any measure to answer my intentions: nay since I have by large experience found the extraordinary use of *Cremor Tartar*,

tar, and highly acidulated *Tartarum Vitriolatum*, in these cases I have not bin over anxious about it, it being a Medicin of difficult preparation, and the others easily to be procured at all times, and in all places.]

In *Scorbutes* attended with Pains, I have frequently known the following Tincture of admirable use, as I have also don in som sort of Gouts, in my Tract of which Distemper I have made mention of it.

℞ Gum. Guaiaci pul. unc. duas,
Succi Liquiritiae Hispan. in ten. taleolas
incis. unc. quatuor.
Sp. Vini rect. ℥ unam.

Infunde clausè & calidè per duos dies, postea decantetur Tinct. clara.

The Dose of this Tincture is a Spoonful Morning and Evening, either in a Glass of warm Ale, or the following Infusion.

℞ Rad. Eringii unc. unam
Lig. Sassafras Dracm. sex
Vini Rhenani ℥ unam
Aq. Font. ℥ unam sem.

Infunde clausè & calidè per horas quatuor, & coletur, colatura reservetur ad usum.

In Scorbutical Cases I have also found *Cremor Tartar* and *Tartarum Vitriolatum*, taken for a considerable time, to be of extraordinary

ry use. And I verily believe if *Cremor Tartar* alone was given in large quantities to our Seamen who go long Voyages, it would in a great measure, if not altogether, prevent the many Inconveniences that attend them by their Scorbatic Habits, which frequently so afflict them, that they are made altogether incapable of doing their Business. Nay, I believe it would also prevent *Calentures*, and other fatal Distempers that destroy so many of our Men, either in long *East* or *West-India* Voyages; and by its cheapness it seems rather adapted for the Necessities of the Poor, than of the Rich. But tho it be cheap, yet if we consider but the Nobleness of its Extract, that alone is sufficient to set a Value upon it: For what is it but the essential Salt of the most noble of all vegetable Productions, *viz.* the Juice of the Grape, that which rejoices the Heart of Man, and makes the Peasant equal with his Lord, and the afflicted Man forget his Misery? As for my self I had rather be without a great part of the *Materia Medica*, than *Cremor Tartar*; for considering it as a simple Remedy, it is of the most universal extent of any thing I know. Without doubt it is the finest Purge in Nature given in a due quantity, it performing that Office without any griping or uneasiness; and in a less quantity is a most noble Alterative, it strengthening the Stomach, and helping Digestion. It allays all violent and unnatural Fermentations of the Blood; it is a fine Diuretic.

retic. To be short, I question whether there be any one natural Production now known or in use, that in all respects is so adapted to do Mankind service as this Medicin is.

I confess it has for many Ages bin in use; but how? it has only bin trifled with, being given by Grains and Scruples, whereas it ought to be by Drams, and even Ounces on occasion: and unless it were *Angelus Sala*, I remember none I ever met with that has prescribed it in large quantities besides my self; and I confess I was first excited to it by what *Angelus Sala* said concerning the cure of himself, when he labor'd under a most dreadful *Colic*, which had like to have cost him his Life, from which he was presently deliver'd by taking (as I remember) six Drams of *Cremor Tartar*. The like Effect I have frequently seen of it in the most violent Colics imaginable, either given in a large quantity at once, or else two drams at a time, repeated every two, three or four hours, according to the urgency of the Case.

Helmont somewhere says, that every Poison carries along with it its own Antidote; and tho Wine drank in moderat quantities be one of the most noble Cordials in Nature, yet the drinking of too large quantities causes as many Inconveniencies as any one thing: nay I believe there are more Chronical Diseases occasion'd by drinking of Wine and Vinous Liquors to excess, than from any thing else.

Now

Now I believe there is no one thing so adapted to prevent the Inconveniences that attend hard Drinking, as *Cremor Tartar* is, which is nothing but the Product of Wine it self. Nay, it not only prevents the Inconveniences of hard Drinking, but for the most part carries off the Diseases already form'd, that are caused by it.

[I have within this two or three years given som hundred Weights of *Cremor Tartar* both in Chronic and acute Cases, and don't remember that I ever observed any inconvenience by it. And for a Purge it is the most delightful in the World; none of the purging Salts, about which there is now so much Noise made, being in the least comparable to it. Nay, I am sure that after Ages will thank me for recommending so cheap and useful a Remedy to the World.]

It would take up too much to say all that might be of this noble Medicin, and I must beg the Reader's Pardon for this Digression in saying so much as I have.

Before I conclude, I shall mention one Objection more against my Opinion, made to me by several, *viz.* That a more than ordinary Saltiness is to be perceiv'd in the Blood of Scorbatic Persons, and this Saltiness they take to be an Acidity. But if they would enquire narrowly into the matter, instead of finding it to be an Acid Saltiness, it will appear to be a Lixivious, Alkalious one.

C H A P. III.

Of the Gout.

I Shall here make only ſom few Obſervations concerning the Gout, it being Couſin German to that of the Scurvy : and by what I have ſeen, I am fully convinced, it is not from Acids, as is generally ſaid, that this troubleſom Diſtemper is occaſioned.

I have obſerv'd conſiderable large *Nodes*, in which are ſometimes contain'd a hard chalky Subſtance, and of which I have ſeen large quantities extracted, which by many Experiments I have found to be as much an Alkaly as either *Crabs Eyes*, *Coral*, *Pearls*, &c. which I ſuppoſe no man will deny.

Now it being granted, that the matter contained in the aforeſaid *Nodes* is an Alkaly, how is it poſſible for this Diſtemper to proceed from Acids, when in thoſe very parts where the Diſtemper moſt violently rages, there are produced ſuch large quantities of an Alkalious Subſtance? For if the Diſtemper proceeds from Acids, as 'tis generally agreed, the Patient need not clog his Stomach with Alkalies, as is uſually practis'd, there being a Remedy already placed in the part affected : And I verily believe, the only reaſon why this Diſ-

Distemper has bin accounted among the *Op-
probria Medicorum*, is from their mistaken No-
tions concerning it.

But if Men will still persist to assert that
this Distemper proceeds from Acids, and at
the same time own the chalky Substance be-
foremention'd, which is only the Morbific
Matter indurated, to be an Alkaly, they must
tacitly believe the Doctrine of Transmutation,
tho openly they are asham'd to own it, and
will ridicule those that do.

But this is not all; for suppose the Acid
Matter causing this Distemper to be transmu-
ted into a chalky, alkalious Substance, the
Distemper must never more pretend to com in
or near the part where this Substance is lodg'd,
it being placed as a Sentinel to guard it off:
Nay, the Blood at times must all, or at least a
great part of it, pass thro the Part or Parts
where this chalky Substance is lodg'd, by
which means one would think it should be suf-
ficiently guarded from any more growing A-
cid; and so by consequence, when the chalky
Nodes are once settled, people have no reason
for the future to fear the return of their Distem-
per; the contrary to which many honest
Gentlemen to their sorrows experience. So
that a man would think these very Nodes a-
lone were sufficient, were there no other rea-
sons to be given, to satisfy one who is master of
his Reason, that Acids are not, but Alkalies
are the cause of this Distemper. And if the

Blood abounds with too many Alkalious Particles, the giving of Alkalies must be preposterous, it being to add Fuel to the Flame, which instead of quenching or extinguishing, makes it so much the greater.

It may not be amiss to take notice, that few are troubled with the Gout, but those who drink large quantities of Wine, or some other generous Liquors abounding with vinous Spirits; so that the Blood and other Juices being impregnated with the said vinous Spirits, these Spirits meet with the volatil, alkalious Salt, of which even the Blood of sound People is never destitute; whereby the vinous Spirit is coagulated, and turn'd into that substance (or somewhat like it) which *Helmont* calls his *Offa Alba*: which coagulated substance not being capable of moving with the Blood and Juices thro the small Vessels, causes Obstructions and violent Pains, and in time, by the addition of other gross, terrestrious Particles, the forementioned chalky Substance.

By the foresaid Coagulation of vinous Spirits with the volatil Alkaly of the Blood, may a very good reason be given for the Generation of the Stone in the Bladder and Kidneys: And Mr. *Boyl* tells us (being what *Helmont* had before don) that having obtain'd some Stones of a certain *Lythotomist*, he put 'em into a Retort, and expos'd 'em to a strong Fire, and found the better half consisted of volatil, alkalious Salt, like that obtainable from Human Blood, and

a considerable quantity of heavy Oil; so that it is plain the Generation of the Stone is not from Acids, but Alkalies.

From which may be infer'd, that it is not from the Acidity of Rhenish Wine that the drinking of it is pernicious to Gouty People, but from its abounding with spirituous Particles more than most other Wines.

I shall here presume to supply a few Omissions in my Tract of the *Gout*, which I doubt not will gain more and more Reputation every day, the Method there laid down being what will generally answer expectation.

I have (*pag. 79.*) given an account of a Balsam of admirable use in taking off the most violent and tormenting Pains; which after it has bin used som time, will cause little Pimples and Blisters on the Part: Now as soon as the Blisters are once rose, the use of the Balsam must be left off, which I forgot to mention, and not be repeated again, till the Blisters or Pimples disappear.

The strengthening of the Stomach, and helping Digestion, being what generally gos a great way in the Cure of Chronical Distempers; therefore to people who either labor under a Fit of the Gout, or are subject to it, I prescribe the constant use of the following Digestive Pouder, both while they labor under a Fit, and when free from it.

℞ *Crem. Tartari Dracm. sex,*
Cardamomi, Cubebæ, ana Dracm. duas,
Sacchari rosati Unc. unam sem.

M. f. Pul. cap. quantum Mucroni Cultri contineri potest sæpius in die.

Instead of the *Elixir Sulphuris*, mentioned pag. 90. I frequently give the following *Elixir Vitrioli*, tho the Intentions of both are the same.

℞ *Garriophyllor. Piperis nigri,*
ana non contus. Unc. duas.
Spirit. Vini Rect. ℥ unam.

digerantur leni calore arena, in Vase vitreo optimè clauso per dies septem; tunc guttatim instilla Ol. Vitrioli optimè rectificati Uncias quatuor; digerantur iterum per dies septem in eadem calore, postea decantetur Elixir clara. Dosis est a gut. 15. ad 20 vel 30.

This Elixir is a noble Stomachic, and of admirable use in other Distempers besides the Gout.

Tartarum vitriolatum and *Cremor Tartari* I much rely on in the Cure of this Distemper; but this ought to be observed, that during the Fit they must be given in such quantities as will procure the Patient three or four Stools in the 24 hours, and no more, at least after the the

the second or third day: But if for the first two or three days they occasion more Stools, it will rather be an advantage than otherwise. Therefore that things may be exactly regulated, the Proportions I have prescrib'd must be varied according to peoples Constitutions and Strength.

When the Pain is not very severe, the Proportion of *Ol. Vitrioli* in the Balsam may be less than I have set down, viz. two Drams of *Ol. Vitrioli* to two Ounces of *Ol. Olivarum*: Let them be well mixt together in a glass Vessel, till they com to the consistence of a Balsam. With this Balsam I have two or three times seen somthing extraordinary don in *edematous* Tumors; as I have also in easing other Pains besides that of the Gout.

[It being a year since the second Edition of this Essay came abroad, I have now several Observations to add to my Tract of the Gout; but considering that is also reprinting, I shall add no more in this Place.]

C H A P. IV.

Of Rheumatifms.

THIS is another Distemper generally said to proceed from Acids in the Blood, but very falsely, as I hope fully to make appear, having had to do with multitudes under this Distemper, and thanks to God, with good success.

I shall not inquire into the original Causes of this Distemper, which are various, that being forein to my design; but immediatly proceed to the business I have undertaken.

First of all; having by the Fire analyz'd the Blood of Rheumatic Persons, I have found it to abound more with Alkalious Particles than that of sound Persons, but not the least grain of an Acid Substance in it: from which alone it may readily be infer'd, That it proceeds not from Acids, but from Alkalies.

But it may be objected, From whence proceeds that *Syziness* and *Viscosity* of the *Serum*, which is observ'd in the Blood of Rheumatic Persons, if not from Acids? For we know that Milk, which is a sort of Serum of the Blood, let it be never so fluid, by the addition of any Acid, tho very gentle, a great part of it will immediatly coagulat and turn into Curds.

To

To which I answer, That the foresaid Objection is altogether invalid; the Viscousness observ'd in the Serum of the Blood, being quite different from that of the Curds in Milk: tho there are substances contain'd in Milk, fit to make both Blood and Serum; but Milk is a much more compound Liquor than the Serum of the Blood: so the comparifon being between Subjects vastly different, it is of no weight.

But suppose the comparifon good; what agreement is there between Curds, and a Substance like Gelly? None at all that I know.

But if instead of curdled Milk, they had made the comparifon between the inviscated Serum and Hartshorn Gelly, they had bin in the right; for indeed I know not any two Subjects more fit to be compar'd together. But then this comparifon will not at all prove the Invifcation of the Serum to proceed from Acid, but from Alkalious Particles; for all who know what Hartshorn is, know the reason of its making a Gelly, is from its abounding with volatil alkalious Salts: and for the same reason it is, that Calves Feet, Izing-glass, Ivory, &c. make Gellies.

By what I have said, I hope I have freed Acids from causing the Viscousness of the Serum of the Blood in Rheumatifms; which Viscosity, if once taken off, the Distemper immediately vanifhes: Yet this is not to be don by Alkalies, that ever I could fee, tho I have given 'em in large quantities; but it is expeditiously

ously to be don by proper Acids, such as the foremention'd Tincture of *Antimony*, &c. and *Chalybeats*.

But here People will think I am caught in a Trap, when I bring in *Chalybeats* among the number of Acids, when generally own'd by all to be Alkalies: to confirm the Truth of which, they tell you it is manifest, that Filings of Iron will make as great an Effervescency with allsorts of Acids, as any of the Alkalies I have mention'd; therefore I must be much in the wrong in reckoning *Chalybeats* among Acids.

From this difficulty I shall endeavor to extricat my self, and also to prove, That Iron or Steel, till converted into a *Vitriol*, which all will allow to be an Acid, cannot act upon the Blood or Serum to cause an alteration in it, nor so much as any way to enter into the Veins or Arteries.

It is the custom of skilful Practitioners, before they give Steel Medicins, to inquire whether their Patients are sensible of any Acidity in their Stomachs: in which part I allow Acids oftentimes to abound, and that exorbitantly. If they perceive any Acidity there, it is found necessary to give Iron or Steel, without any Preparation at all, because by means of the Acids in the Stomach it is turn'd into a *Vitriol*, and so made capable of being carried into the Blood; whereas in such cases, if it has bin before satiated by a precedent Pre-

Preparation, it has little or no effect at all. On the other hand, if there be no sensible Acidity in the Stomach, Iron or Steel given unprepar'd, are carried off by Stool, without the least alteration, or any part of it admitted into the Blood.

[In Hypochondriacal and Histerical Persons, who mostly complain of an Acidity in their Stomachs, I have with wonderful success given four or five Iron Bullets filed from small Rods every day just after Dinner, and have ordered the continuance of them sometimes for three or four Months; and when all other Methods have failed, this has effectually taken place.]

All or most of the Preparations of Steel I know good for any thing, are perform'd by means of Acids, which tend to the dividing their parts, and turning them into a *Vitriol*. Now according to the difference of the Acids us'd, the result is a different sort of *Vitriol*, which has different operations: But on the contrary, Alkalies do so lock up the Body of Iron, as to make it unfit to be taken as Medicin, because of its extraordinary hardness and firmness of Texture.

The Preparations of Steel I generally use is that which gos by the name of Dr. *Willis*, and is almost every where to be had; which tho grown common, is no despicable Medicin, and is that which follows.

Take

Take of filings of Steel, or rather Iron, very clean and free from dust, one Pound and half; Sal Armoniac two pound: make the Sal Armoniac into very fine Powder; then mix them well together in an iron or stone Mortar; then put the mixture into a moist Cellar, and let it stand a week: Then put it into a very large Crucible, which cover with a piece of Tile; afterwards put the Crucible into a Charcoal Fire, which increase by degrees, till the Crucible be almost red hot: after it has continued in this state about an hour, take away the Fire, and let your calcined matter cool by degrees; when cold, take it out of the Crucible, and make it into fine Powder in a glass or stone Mortar; then put it into a Bottle with a wide mouth, which stop with a glass Stopple, and keep in a warm place.

[The Method I use in making that Preparation of Steel, known by the name of Dr. Willis, is as follows.

Take clean filings of Steel one Pound, Cremor Tartar three Pound; mix them well together in an Iron Mortar; then put them into an Iron or Earthen Pot; pour upon them a Gallon of Spring Water, and over a very gentle Fire evaporate to the consistence of Hony, stirring all the time with an Iron Spatula: afterwards add another Gallon of Water, evaporate as before;

fore; then take it out, and put it upon an Iron or Tin Plate: let it stand in a warm place till it is perfectly dry; then make it into fine Powder, and keep for use.]

These two Preparations properly given, and with convenient Vehicles, I have known of great use in som Rheumatisms: and the first, when all other Medicins have prov'd ineffectual, scarce ever fail'd me in the most inveterat Obstructions of the *Menses* in Women.

Besides the foremention'd Preparations of Steel, I have frequently found *Cinnaber* of *Antimony*, or even common *Cinnaber* mixt with a due proportion of *Gum Guaiaci*, and given in large quantities, to be of great use, not only in som confirm'd Rheumatisms, but even in *Sciaticas* of long standing, by which alone I have known many cured.

I formerly believ'd *Cinnaber* of *Antimony*, and common *Cinnaber* to be Alkalies; but since I have more nicely inquir'd, I find by a peculiar management, a large quantity of an acid, sulphureous Spirit may be obtain'd from them: [And unless the *Mercury*, which is a main ingredient in the Composition, be accounted an Alkaly, there is no such thing to be found in it. But for my part, what to make of that fugitive Servant of poor Chymists, I cannot tell; and must ingenuously own, after much Mony and Time spent in inquiring into the nature of it, I know no more than what I do

do by its effects, which are sometimes extraordinary, if manag'd with discretion.]

Before I conclude this Head, it will not be amiss to observe one thing about the Preparation of Steel beforemention'd, *viz.* that while it is kept dry, and in a Pouder, it is one of the greatest *Deoppilatives*, or openers of Obstructions imaginable: But let it be put in a Cellar, and run *per deliquium*, which it will in a few days, 50 or 60 Drops of the said Oil *per deliquium*, given twice a day in a strong Decoction of *Oak Bark*, I have of late found rarely to fail in stopping a seminal Flux, which all will allow has hitherto bin found as difficult as any thing whatever. Som having told me, they supposed the Stipticity to proceed from the Decoction of *Oak Bark* only, I purposely tried it alone: and tho I own *Oak Bark* to be a noble Stiptic, and to do Wonders, the Decoction being taken at the Mouth, and by way of Clyster, in common simple *Diarrheas*, and even sometimes in bloody Fluxes; yet in the foremention'd case it would do nothing at all: but adding som drops of the Oil of *Mars* to the Decoction, it soon had the desir'd effect.

Of late I have bin induc'd to use the following Method in the Cure of Rheumatisms, and in a great number of Cases it has rarely failed me; and where it has failed, I have not had the least Temptation to blame the Method or Medicins.

℞ Tart. Vitriolati Dracm. unam
 Cremor. Tartari Dracm. sex
 Ol. Garrioph. gut. sex
 Sacchari rosati Dracm. tres

M. f. Pul. in sex Chartulas distribuend. ex quibus cap. unam quater in die in Cochlear. Syr. e Rubo Ideo, superbibendo haust. Julap. sequentis.

℞ Rad. Eringii Unc. duas
 Aq. Font. ℥ duas

Infunde clausè & calidè per horas duas vel tres, & coletur; colaturæ adde Vini Rubri Gal. unc. octo
 Syr. de Rubo Ideo unc. tres
 Elix. Vitrioli gut. 40. M.

℞ Elix. Vitrioli Dracm. duas
 cap. gut. duodecem in haust. Vini Rub. &
 Aq. Font. ana p. e. horâ dimidiâ ante prandium.

℞ Sp. Vini non Rect. unc. sex, vel octo, vel decem.

Ol. Vitrioli Dul. unc. unam.
 M. f. Mixt. cum quâ embrocetur Partes affectæ manè & serò, superponendo Pannum laneum.

℞ Cremor Tart. Dracm. sex
 Cardamomi, Cubearum,
 Galangæ, ana Drac. duas
 Sacchari Rosati unc. unam semis.

M. f. Pul. cap. quantum Mucroni Cultri contineri potest sæpius in die. After

After the Pains are quite gon, I prescribe a Steel Course for 3 Weeks or a Month, and during that time a continuance of the *Elixir* of *Vitriol* before dinner, and of the *Digestive Powder*.

But in this case, as well as in the Gout, the quantity of *Cremor Tartar* and *Tartar Vitriolatum* ought to be such, as to occasion 3 or 4 Stools in 24 hours, and no more, at least after the first day or two; and therefore as peoples Strength and Constitutions vary, the quantities ought to be lessen'd or increas'd, as occasion is.

The *Oleum Vitrioli Dul.* for the *Embrocation* is as follows; that commonly sold in the Shops, which is made by Distillation, being good for little or nothing.

℞ *Ol. Vitrioli opt. rect.*

Sp. Vini Rect. ana p. e.

Cum cautelâ misceantur, & postea digerantur leni Calore arena, in Vase vitreo optimè clauso per dies decem, & reservetur ad usum.

[To conclude, and as an addition to this Edition of my Essay, I shall make the following remarks, being the effects of farther observation.

Rheumatisms, properly so called, may be distinguish'd into *Acute* and *Chronic* ones. An *Acute Rheumatism* is as much an inflammatory Distem-

Distemper as a *Pleurisy* or a *Peripneumony*; but by reason the offending Matter is not lodged on any of the noble parts, the consequence is not so fatal. Now people being ill treated in Acute Rheumatisms, their Distemper becomes a Chronic habitual one, which perhaps hangs upon 'em for many years, with many instances of which I have of late met. Now in Acute Rheumatisms, I always or mostly use the last Method, only omit the Digestive Pouder; and sometimes instead of the Embrocation, I bathe the Parts with good *Elder* Vinegar, or Vinegar impregnated with other Aromatics; and let them drink plentifully of *Lemonade*, or other acidulated Liquors. After the Distemper is over, to confirm the Tone of the Parts, which can't fail of being debilitated by the great pains, I put them into a Steel Course for three Weeks or a Month. In Chronic ones, where the Blood is sily, I use the same Method with the digestive Pouder; and in neither of them scarce ever fail of Success. But in Chronic Rheumatisms, where the Blood is not sily, I give the foremention'd Medicins, with *Gum Guaiaci*, &c. where they want Evacuations; which, as is elsewhere observed, being given in due quantities, never fails to prove a noble Purge. But where they do not want evacuations, I altogether rely on proper *Chalybeats*, suited to the Constitution. This Subject alone deserves a particular Treatise; but I have already promised so much, that I can't

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think of any such thing, till what I am about is finished, which will not be in a short time.]

C H A P. V.

Of Consumptions.

I Have little to say at present on this Subject, but that I have seen great numbers of People under this circumstance, to whom large quantities of Alkalies, all sorts of *Balsamics*, and those things called *Pectorals*, have bin given without the least advantage; tho I have seen others that have had the manifest signs of a confirm'd *Phtisis* or Consumption, who by the plentiful use of proper Acids have bin reduc'd from a state of dying to perfect Health.

My Reasons in short, according to the best Observations, for the use of Acids, and the disuse of Alkalies, are as follow.

The Globules of the Blood, by reason of too great a quantity of Acrid, Alkalious, Lixivious Particles mix'd with it, being broken, and confus'dly mix'd with the Serum, are together with the Serum admitted into the small Glandules of the Lungs; and not being capable to be discharg'd, cause Inflammations there, and by consequence Hectic Fevers, which always precede and accompany a *Phtisis* or Consumption. Now by the use of Alkalies
and

and Balsamics, these extravasated, broken Globules are so far from being thrown out, and the deprav'd state of the Blood from being alter'd, that it is made much worse; and by Balsamics the Pustles, occasion'd from the extravasated Globules being admitted into the small Glandules, are brought to Suppuration, the necessary consequence of which is an Ulceration; and when so tender a part as the Lungs is once ulcerated, he must shew himself an Artift indeed that can heal it.

Now proper Acids given in due time, confirm the Texture of the Blood, and reduce the Serum to a state of fluidity, wherby the Fever and Inflammation of the Lungs are taken off: and the extravasated Globules of Blood, by means of a thin Serum, assisted by its quick motion in that part when in a fluid state, are by degrees carried off, and so the Pustles disappear.

But it may be objected, How com the broken Globules of the Blood you so often mention, to be admitted with the Serum into the Glands of several parts, and yet cannot by the same reason be carried to the parts design'd with the Serum or *Lympha*, as it is stil'd, when it once coms into the Lymphatic Vessels?

To which I answer, That when they are first admitted into the Glands, I mean the broken Globules, coming just out of the extremities of the Arteries, and being then very hot, the sides of them are lax, and in som mea-

ture capable of being comprẽst or squeez'd together ; but when once admitted into the Glands, the motion of the Serum from them, thro the Lymphatic Vessels, being very slow, they soon grow cool, and so more firm ; and by reason of the different figure of these broken Globules from the Pores, by which the Serum is to pass from the Glands to the Lymphatic Vessels, they are not suffer'd to go thro with the Serum, as in the foremention'd instance of Oil and Water : so that the Globules being extravasated and without motion, corrupt, from which Corruption proceed all the ill Symtoms that accrue from the broken Globules of the Blood being admitted into the Glands.

I am furnishing my self with Materials, in order to write a particular Tract concerning Consumptions ; in the Cure of which Distemper I hope to make more considerable Advances than have bin yet made, and therefore shall say no more concerning it in this place.

But to return to Acids. To confirm the truth of what I have said, besides my own Observations, I remember *Riverius*, that famous Practitioner, somewhere says, That he several times cur'd a confirm'd *Phtisis* or Consumption, by giving only large quantities of Conserve of red Roses, well acidulated with Oil of *Sulphur per Campanam*.

And now I am speaking of that Oil, let me add the account *Helmont* gives of it in his *Arbor Vitæ* ; which tho it has no immediat relation

tion to the Point in hand, yet may be pertinent enough, to shew the good effects of Acids in keeping the Blood in a good Texture, and by that means prolonging Life, and preserving us from Diseases. *Moses*, who perhaps understood the Mysteries of Nature as well as any Man, and was guided by an infallible Spirit, says, that in the Blood is contain'd the Life. Now the Texture of the Blood being confirm'd, and its Globules whole, must go a great way towards prolongation of Life : But on the contrary, the Texture of the Blood being spoil'd, and its Globules broken (which they are by Alkalies) must in great measure shorten Life, and occasion Diseases.

In the Year 1600, says *Helmont*, a certain Poor Man, being burden'd with many small Children, complain'd to me that he was 58 years of age, and if he should chance to die, his Children must go a begging. He ask'd of me somthing, wherby his Life might be preserv'd. I being a Young Man, and commiserating his Condition, consider'd that a lighted Match of Brimstone would preserve Wine from Corruption ; and therefore concluded, that the Acid Oil of Sulphur did necessarily so contain this Flame of Sulphur, and all the Smell of it, that it self was nothing else, meaning the Acid Spirit or Oil, but the Fume of Sulphur it self, imbib'd by its Mercurial Salt. Last of all, I was confirm'd that the Blood was the Wine of our Lives ; and that being preserv'd,

if it occasion'd not long Life; would at least in some measure lengthen it, by our being guarded from Diseases, and free from Pains. Wherefore I gave him a Pot full of the distill'd Liquor, or Oil of Sulphur, and likewise taught him to distil the said Oil from kindled Brimstone. I furthermore bid him take every Meal in the first draught of Beer he drank, two drops of the said Liquor, and by no means exceed it; I being satisfied that two Drops did contain a large quantity of the Fume of Sulphur. The Man followed my Advice, and now walks about the Streets of *Bruxels*, being 1641. And, which is more than all, for the whole 40 years he never labor'd under any Distemper, tho once by a Fall on the Ice he broke his Leg near the Knee; yet all the time he was under Cure he was free from a Fever. He continued slender and lean, and tho in want of all necessities, liv'd to be thus old. The Name of this old Man is *John Mass*, who served in the Bed-Chamber of the Bishop of *Ypre* when Count *Egmont* and *Horn* were beheaded, and was then 25 years of age.

The Truth of this Relation need not in the least be doubted, the Man being alive and well when it was wrote. By which Instance it is plain, that Acids are not the Cause of Diseases, but Preservatives against them; and whatever is a Preservative from Distempers, by parity of reason must be of use to repel them.

A signal Instance of which I remember I have somewhere read, of a Person who suffered himself to be bit by a Viper, in order to try the good Effects of Monsieur *Charras's* Volatil Alkalious Salt of the same Animal, in preventing and taking off the Symtoms that attend the Biting of the said Creature. The Volatil Salt and other Antidotes were in large quantities given, but all in vain; for instead of allaying, the Symtoms so increased, that nothing less was to be fear'd than the loss of the poor Man's Life. To the best of my remembrance, nay I think I may be positive, it was in the Wrist where he was bitten; but for all the Volatil Salts and other Antidotes, in a little time his Arm was swel'd so big, and so high, that Amputation could do him no service; nay, all the By-standers, that were many, gave him up for dead. At last a certain Person advis'd giving large quantities of only so simple an Acid as Juice of *Citrons*; which immediately abated the Symtoms, and retriev'd him from all manner of Danger. [See more of this matter in my Account of the Cure of the Person bit by a Viper.]

We live in an inquisitive Age, wherin People have more sense than to take things on trust: The obtaining of the Blood both of healthy and distemper'd Persons, is not difficult; and I desire no greater justice, than that People would themselves try the truth of what I have said: and if after trial it be found that

the Blood of persons in any of the forementioned cases, has any Acid abounding in it, I will own my self in the wrong ; but shall never take the least notice of such scurrilous Answers as I have bin used to, nothing of that nature being in the least valid with me that is not confirm'd by well-attested Experiments.

The Conclusion.

IT is, I suppose, allowed by all that *Sea-Salt* is an Acid, and for that reason only, we who eat so much Flesh are not able to live without it. For all sorts of Flesh abounding with large quantities of volatil Alkalious Salts, if these were not in som measure lock'd up and mortified by the means of Sea-Salt, or (which is all one) what is the product of our English Brine-pits, which have their saltness from the same origin, *viz.* Currents of Water passing thro great Rocks of Salt ; which late Discoveries have made appear to be both in *England*, and many other parts of the World ; as for instance, one in *Cheshire*, whose Vein is 20 Yards thick, and may be traced for many Miles together ; which alone is sufficient to impregnat almost an Ocean of Waters : I say, were it not that the Volatil Alkaly contain'd in the Meat we eat was in som measure lockt up

or mortified by means of the foresaid Salt, the eating of quantities of Meat would certainly destroy us. [The constant use of Bread also is of no small advantage to us, it being a Substance greatly abounding with Acid Particles, as by the analyzing of it will easily appear.]

There is reason to believe, That before the Flood People did not eat Flesh, but liv'd altogether on Vegetables, as Fruits, Herbs and Roots; which I suppose was one great reason of their Longevity. And it may be observ'd, that in *Herefordshire*, and other Countries abounding with Fruit, the People are longer liv'd than in those Countries that want it. But had the *Antediluvians* eaten Flesh, as we do now, I can't imagin what they would have don for Salt: for supposing Dr. Burnet's Hypothesis true (of which I think there is no reason to doubt, his Arguments being to me unanswerable) I suppose their Rivers must have bin altogether void of Saltnefs; and how they could com at Salt any other way, considering the state of their Earth, I can't imagin: And for them to have eaten Meat without Salt must necessarily have greatly prejudic'd their Healths, and shortned their Lives. For we have seen in the late *Irish* Wars great Destruction and Desolation in our Army by eating Meat without Salt, of which at one time there was a scarcity; whole Regiments having bin swept away together with Fevers and Fluxes. But the *Antediluvians* living on Vegetables,

tables, had no need of Salt, there being a sufficient quantity of Acidity in them to confirm the Texture of their Blood, and preserve them from Diseases.

That the Food of the *Antediluvians* was only Herbs, and the eating of Flesh was not allowed till the Waters of the Flood were abated, the following Texts evince. *Gen. 1.29.* After God had said to *Adam*, *Be fruitful, and multiply, and replenish the Earth*, and had given him Dominion over the Creatures, it comes in; *And God said, Behold, I have given you every Herb bearing Seed, which is upon the face of all the Earth, and every Tree in which is the Fruit of a Tree yeilding Seed; to you it shall be for Meat.* After the Waters of the Flood were gon, God blesses *Noah* and his Sons, as he had before don *Adam*, and said to them, *Be fruitful, and multiply, and replenish the Earth*; and then gives them Dominion over the Creatures: after which he says, *Ch. 9. 3. Every moving thing that lives shall be Meat for you; even as the green Herb have I given you all things.* Now after the use of Flesh was allow'd, we find no one person, *Noah* excepted, who arrived to the Age of any of the *Antediluvian* Fathers, the natural reason of which is very plain.

Since I have bin mentioning Sea-Salt, I shall make bold to relate a strange and accidental Cure wrought on a Person in a *Tympanitis*, given over as incurable by the most eminent

nent Physicians of *England*, by barely immersing her two or three times over Head in Sea-Water.

The Person was Daughter to an eminent Citizen of *Worcester*; she had labor'd under a *Tympanitis* three or four Years: her Father applied to most of the eminent Physicians for Advice, but all they could do signified nothing. He has several times told me, that his Cloak, tho he was a corpulent Man, would not lap round her, her *Abdomen* was swel'd so big, and she then not above ten Years of Age. It happen'd one Morning that her Mother, two Brothers, her self, and a Maid-servant, were bitten by a little Dog they had, that was grown mad. Advice was presently given by Dr. *Johnson*, an eminent Physician then in *Worcester*, that they should all go to the Salt-Waters to be dipt; (observe by the way the efficacy of these Waters in preventing the dreadful Symtoms that attend those bitten by Mad-Dogs.) The Mother, with her two Sons and Maid-servant prepar'd to go; but she did not design to take her Daughter with her, supposing her not capable of living till she came to the Journey's end. The poor distressed Child seeing 'em all going away without her, told her Father he took care of every body else, but valued not what became of her; on which he being moved with compassion, resolv'd she should go, let the event be what it would. Accordingly she was carried down, and when she came to
be

bedipt, it was as much as two Men could do to immerge her over Head: After they were all dipt, they were carried to an adjacent House, and put to Bed, where she had not bin many Hours, but she call'd for a Pot, and piss'd several Quarts, even more at that one time, than she had don som Months before; and when they return'd to *Worcester*, which was within a few days, she run out of the Boat to her Father without any help, tho she had not bin able to stand of a year or two before. To be short, without any other help, she was perfectly cur'd of her *Tympanitis*, and is now a tall, slender, healthy Woman as any I know.

I have mention'd this thing, because I find it no where taken notice of, and it may be of service to others. Nay, I am told a certain obscure Person in *Herefordshire* has cur'd several by the same Method, to his great Advantage, who withal says, it never once failed him.

I beg the Lady's pardon for writing this Relation without her leave; but since I have no other end in it than to serve Mankind, I doubt not I shall be excused.

Helmont positively says, and I have found it true, That Spirit of Sea-Salt which is an exalted Acid, is a certain Remedy in the *Strangury*, a Distemper generally said to proceed from Acids; which if it dos, instead of being cur'd, must be highly exasperated by Spirit of Sea-Salt, the contrary of which I have frequently experienced. *Helmont* somewhere
else

else says of it, *Est namque Acidissimus, nec sibi par habet remedium extinguendis ardoribus Urinae, etiam presente in Vesica Calculo.*

I remember not long since an Eminent Physician told me, that bare Juice of Lemons would sooner take off the Heat of Urin in People that are, as we call it, clap'd, than *Emulsions*, or any thing commonly used: which since I have found true; and also that the Urin of such Persons abounds more with Volatil Alkalious Salt, than that of sound People: Upon which I have bin induc'd to try whether the Acid Spirit of *Guaiacum*, which that Wood affords in large quantities, would not be more prevalent in the Cure of confirmed Poxes, than the bare Infusion or Decoction of the said Wood; which in conjunction with *Cinnaber* of *Antimony* or common *Cinnaber*, and *Gum Guaiaci*, I have frequently given with good success in confirm'd Poxes; nay, som that have eluded the Force of a regular Salivation, I have cur'd by this Method.

I am apt to believe, if the rectified Acid Spirits obtainable from most, if not all Woods, were us'd, they would be found to be great *Specifics* in most Distempers, especially Chronical ones. And I have great reason to think that rectified Spirit of *Asb*, taken for a considerable time together morning and evening in a proper Vehicle, would prove a noble Medicine, in gradually wasting Stones already form'd either in the Kidneys or Bladder.

And

And since I have mention'd *Specifics*, I own it may be rationally objected, That my Doctrin of *Acids* dos mightily thwart that of *Specifics*, of which many, that are neither *Alkalies* nor *Acids*, seldom fail of curing Distempers, as likely to be supposed to proceed from *Alkalious Particles* abounding, as any whatever.

To which I answer, that I have only brought my Doctrin upon the Stage, as a general one, in opposition to that general and pernicious one of *Alkalies*. For should I deny the Doctrin of *Specifics*, I must deny matter of fact; which I shall never do till totally depriv'd of my Reason.

There is a little Herb called *Paronychia cum Folis Rutaceis*, or *Whitlow Grass*, with Leaves like *Rue*; which the Honorable Mr. *Boyl* recommends as a Specific in the King's Evil: This Herb I have immerg'd both in moderately Acid and *Alkalious Liquors*, and could perceive no *Luctus* or Effervescency; yet I have known it do wonders in the foremention'd Distemper, without having the least sensible Operation: I shall give one instance.

A poor Woman in *Worcester* having an only Child of about ten Years of Age, who by weaving Bone-lace maintained both her and it self, made a great complaint to me one day that she was undon. I asked her the cause; she told me, her Child who kept her in her old Age from Begging, had for two Years had *Scrophulous*

phulous Tumors in and near her Privities; and that about three Months before, one of the said Tumors began to ulcerat; and that now the Ulcers were got into her Body, which made her incapable of Sitting. I went immediately with the Woman to see her Daughter, and found what she said was true, the poor Girl being the most miserable Spectacle I ever saw. I remembring what Mr. *Boyl* had said concerning *Paronychia*, and being sufficiently satisfied there was no reason to doubt of any thing he had said, when related as matter of Fact on his own Knowledg, resolved to try it upon this Girl. I first purged her three or four times with *Calamelanos*, *Razin* of *Jallap*, and *Cremor Tartar*; and afterwards gave her two large Handfuls of the said Herb dried, ordering her to put it into two Gallons of small Beer after it had don working, and to let it stand six days, and then drink it for her constant Drink: She continued to take it for about two Months, in which time, without applying any thing to the Ulcers save clean Clothes, both Ulcers and Tumors vanish'd; and she continued well till I left *Worcester*, which was two years after the Cure, and is so still for ought I can hear, having several times inquir'd after her.

[I have several times since made use of the said Herb with good success, tho I cannot say it will always succeed, there being som *Scrophulous* Cases, wherein nothing yet known will
take

take the least place. I have seldom recommended Medicins without full trial, but at this time shall presume to propose the use of *Stavesacre*, applied by way of Pultice to inveterat scrophulous Tumors, at the same time using such evacuating Medicins as won't debilitate Nature. The reasons for my recommending it I think not fit to take notice of now; but if I find it answers expectation, I shall do it hereafter.]

Another Instance of the Operation of Specifics, without their being either Alkalies or Acids, is that frequently experimented Decoction of *Mercury*, after having bin boil'd a considerable time in Water, which has bin found not to lose the least Grain of its former Weight, or impart either Taste or Color to the Water; yet the Water in which the Mercury was decocted, has not fail'd of killing and bringing away Worms, when other celebrated Medicins have.

Likewise *Crocus Metallorum*, and other Preparations of *Antimony*, being barely infus'd in Wine, without losing the least Grain of their Weight, or imparting either Smell, Taste, or Color to the Wine in which they are infus'd, never fail of giving the Wine a violently *Emetic* Quality. I have at several times pour'd above 20 Quarts of *Canary* upon the same Ounce of *Crocus Metallorum* powder'd, and found the last Quart as violently *Emetic* as the first; tho after nice trial, I could not perceive

ceive the Pouder diminish'd one Grain in Weight, or had, as before observed, caus'd the least sensible Alteration in the Wine.

The *Cortex*, that noble Specific in all intermitting Fevers, I don't apprehend to perform its office either as an Alkaly or Acid; tho being mix'd with Acids, it dos its work much better than without 'em.

It is a general Complaint against that noble Medicin, and is the only occasion of deterring som from the use of it, That being given in never so large quantities, especially in *Quartans*, it only puts off the Fit for a time, but dos not totally eradicat the Distemper, which returns after a certain period. To obviat which Inconvenience I have bin advised to give it after the following manner, which seldom or never fails of preventing the return of the Distemper.

Two Hours before the Fit, I give a gentle *Emetic*; after that has don working, an *Opiat*: when the Fit is over, I give the quantity of a large Nutmeg of the following Electuary with the Decoction, and repeat it every 4 hours for five or six days, ordering my Patients to eat somthing of easy digestion within an hour after each Dose. After five or six days, I give it only first in the Morning, and at five in the Afternoon for a Week, eating somthing after each Dose.

R *Cort. Peruviani elect. Unc. unam;*
reducetur in pulverem impalpabilem &
 L *cum*

*An Essay concerning
cum Syrupo Limonum, q. s. f. Electua-
rium.*

Immediatly after each Dose I give about a quarter of a Pint of the following Decoction:

℞ *Cort. Peruviani elect. Unc. unam.*
Rad. Gentiana Dracm. duas
Flor. Centaurii Pug. duas
Aq. Font. ℥ quatuor,

*Bulliantur ad dimidie partis consumptionem, &
coletur; colatura reservetur ad usum.*

By this Method I have known three or four Ounces of the *Cortex* perfectly cure *Quartans* without any Relapse, after taking a Pound or more in the common Method, which has only put by the Fits for a time.

The Reasons, as I apprehend, why this method of giving it should be more prevalent than that commonly us'd, are; the Particles of the *Cortex* being very firm, the Medicin being taken, and the Patient fasting three or four Hours after it, it slides out of the Stomach into the small Guts, and so on: the small Guts being emty, there is not pressure enough to squeeze but a small quantity of it into the Lacteal Vessels; so that the greatest part of it is carried away as Excrement: But the Patient eating something of easy digestion, within so small a time as an Hour after it, that eaten, is turn'd into Chyle before the Particles of the
Cortex

Cortex can be carried off; and the Chyle being of a viscous Nature, retains the small Particles, and carries 'em with it into the Blood: so that the Blood is more impregnated by one Dose given this way, than with twenty Doses without presently eating after it.

To confirm the truth of what I have said concerning the firmness of the Particles of the *Cortex*; if you boil it never so well, the clear Decoction will scarce cure a *Quotidian*, or *Tertian* Ague: whereas the *Cortex* after it has bin well boild, being reduc'd to Pouder, and given after the foresaid manner, will cure a *Quartan*.

It would be a great Blessing to the Commonwealth of Physic, if there was a faithful Record kept of all the Cures wrought by simple Medicins, wherby Physicians might arrive to a certainty of curing more Distempers than that of Agues; which I never expect to see, so long as tedious, nonsensical Compositions are depended on.

I don't remember any of the antient or modern *Botannic* Writers have mention'd the Leaves of *Assarabacca* to have any other quality than that of a violent Purger by Vomit and Stool: But Mr. *Pit*, a late eminent and learned Apothecary of *Worcester*, my good Friend, told me, that he found it to be one of the most noble Purgers of the Head he ever knew, having a different Operation from any other Medicin he ever met with; that the snuffing up of three, four, or five Grains of the Pouder of

the dried Leaves at Night going to Bed, would on the Morrow, without disturbing rest that Night, but rather causing it, occasion the discharge of a vast quantity of serous Matter from the Glands of the Nose; nay, would sometimes last for two or three Days, without being in the least a *Sternutatory*.

By the repeated use of this Pouder alone, I have known the most violent confirmed Headachs imaginable taken off, after they have eluded the efficacy of the most noble, celebrated *Cephalics*: But this ought to be minded, That whoever takes this Medicin, must confine themselves to their Houses, and keep as warm as if they had taken the most violent Purge.

I have bin told by a certain Gentleman, who uses a great quantity of the Pouder of this Herb among his poor Neighbors after the foresaid manner, that he was once induced to use it in a Deafness of long standing: he gave the Patient four or five Grains to snuff up into each Nostril every fourth or fifth Night, and order'd three Grains every Night to be blown with a Quil into each Ear; and in a Fortnight the Party recover'd his Hearing as well as ever.

Not long since I was told by a worthy Gentleman, that a Person who had bin deaf 14 Years, was induc'd to try whether the *Assarabacca* would do him any Service, and in a little time, using it after the forementioned manner, he was perfectly restor'd to his Hearing.

I could expatiate largely concerning simple
spe-

specific Remedies. But what I have said is enough to satisfy the World, that I allow the Doctrin of *Specifics*; nay I think it ought to be lamented it is not more cultivated.

I have bin told by som intelligent Persons, who have much convers'd with the Natives of *West-India*, that the Doctrin of *Specifics* is mightily cultivated by those barbarous People, wherby they have arriv'd to a certainty in curing most Distempers; and that to see People of 120, and 130 Years of Age, is as common, as in *England* to see People of 60. Now what a shame is it for us who live in a learned and inquisitive Age, to be outdon by those barbarous and illiterat People? Nay, for ought I know, the greatest part of our Skill we had from them, or a People altogether as ignorant.

The Physicians of *Europe* are not arriv'd to so great a certainty in any thing, as in the cure of Agues; and who may we thank for that but the poor *Indians*, who imparted to us the use of their famous Bark?

From whence had *Hippocrates*, that Father of Physicians, his Skill, but by collecting the common Observations? which alone made him so famous throout the World. But the State of Nature is much alter'd in that long tract of time since he lived; and the difference of our Climat from that wherin he lived, makes his Observations not altogether hold good with us. So that if we will arrive to any certainty in our Art, we must make nice Observations of our own.

Helmont in his Treatise of Fevers says, *Quis- que Artificum facit quod promittit, Statuarius nempe Statuam, Calcearius Calceos ipdubiè parat; solus autem Medicus nil audet ex arte spondere suâ, quia nititur Fundamentis incertis, per acci- dens duntaxat, subinde, atque dolose proficuum.* Which is, that there is a certainty in all Pro- fessions but that of a Physician; and it is al- together our own Faults, for want of due Ob- servation, that we act on such Uncertainties as we do.

But to return to the business of Acids; What great benefit dos Mankind in general receive from Mineral-Spring-Waters? All of which are allow'd to be Acids; and according to the difference of the Acid contain'd in 'em, they have different Operations. Som of them, as *Aston, Epsom, Dullidg, Northal, &c.* abound- ing with *Aluminous*, as well as *Vitriolic* Par- ticles, work by Stool. Others, as *Tunbridg, Astrop, Ilmington, &c.* abounding with *Vitri- olic* Particles only, are Alteratives, and gene- rally carried off by Urin. The *Bath-Waters*, abounding with *Nitro Sulphureous* Particles, have a different Operation from any of the for- mer, but are generally carried off by Urin, tho sometimes by Sweat.

There is scarce a Person laboring under any Chronical Distemper, or ill habit of Body, whose Fortune or Business will permit him, but at the proper Season is sent to one of the foremention'd Places; and I believe, to our no

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great

great Credit, that more People are freed from Chronical Distempers by the use of Mineral Waters, than by all other Prescriptions: Tho I am well satisfied that Mineral Waters, not properly taken, do frequently a great deal of Mischief.

Besides the service don to Mankind by drinking Mineral Waters, what advantage accrues to many laboring under som sort of Nervous Distempers, &c. by merely bathing in the Nitro-sulphureous Hot Baths? But this ought to be observed, that the bathing in Hot Baths is only serviceable to those whose Nerves are contracted; but in all Cases where the Parts are relaxed, it is highly pernicious.

There is also a new way of Sweating by means of the Volatil Acid Steams arising from the evaporating Brine, in making Salt at our English Salt-pits, lately invented by Mr. *Henry Hodges* of *Droytwych* in *Worcestershire*, wherby several great things have bin don, even where the *Bath*, common *Hummums* and *Bagnios* have altogether proved ineffectual. I am sorry I am where I cannot procure a number of Experiments to insert in this place, which might be of service to Mankind: but to supply their room, I shall add something don in a little Bathing-House I erected of my own, wherin I imitated, if not outdid the way of sweating at *Droytwych*; but my many Avocations hindered me from prosecuting it.

I procur'd som of the *Virgin-Salt* from the Salt-Rock in *Cheshire*; and, as I had occasion, dissolv'd a convenient quantity in Spring-Water, making a Brine as strong as that obtainable from the Brine-Pits; with this Brine I fill'd a large Iron Pot, which had Pipes of Wood that went from it to a little Room over-head, made convenient for People to sweat in: Under my Pot I made a fire, which both warm'd the Room, and made the Brine to boil; and from the boiling Brine arose such quantities of Steams as fill'd my Room, which, when warmed and full of Steams, was fit for use: I had, beside the large Pipes which supplied the whole Room, several others of different lengths, by the means of which I more forcibly convey'd the Steams to any particular part. By this way of Sweating, I knew a Gentlewoman cured, as was also one at *Droytwych*, of an inveterat Leprosy, which had eluded the Efficacy of all other Medicins and Baths. It rarely fail'd taking off the most violent old Aches and Pains. In all Relaxations of the Nerves and Tendons, I never met with any thing comparable to it. To be short, I found it as good as the Bath in most things, and in many out-did it; and I believe Mr *Hodges*, computing the time he used the way of Sweating at his Brine-Pits, and the number of People he had, can produce a greater Catalog, and more considerable Cures wrought, than have bin at the Bath.

End.

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But

But here it may fairly be objected, that I allow the bathing in Hot Baths to be only serviceable where the Parts are contracted, and pernicious where they are relaxed: Yet I commend the bathing in these hot Steams, as of admirable use where the parts are relaxed; in which there seems a plain Contradiction.

To which I answer: That while People are incompassed in the Steams, and sweating, there is a universal Relaxation of all the Parts; but the Steams proceeding from the Dissolution of the Virgin Salt, which is full of Volatil Acid Particles, the parts being greatly relax'd in Sweating, are capable of receiving the said Particles into them, wherby, as soon as the sweating is over, they regain a greater Vigor and Contraction.

I hope by the means of Experimental Philosophy, so happily begun and encourag'd by that admirable, and never sufficiently to be valued Mr. *Boyl*, to see the Art of Physic arrive to as great a Certainty and Perfection as other Arts and Sciences. For, as I before observed, by chymically analyzing the Blood and Juices, both in their natural and morbid states, we may arrive to som certainty in the knowledg of the Cause of Distempers, of which I am afraid we have hitherto bin greatly ignorant; and when once their Causes are thorowly known, their Cure will not be difficult.

I shall conclude in the Words of that industrious Philosopher by the Fire, *Helmont*, in his
Trea-

Treatise De Lithiasi. In nostris furnis legimus, non esse in Natura certius sciendi genus ad cognoscendum per causas radicales & constitutivas rerum; quam dum scitur quid, quantumque in re quaque sit contentum. Ita quidem ut cognitio & connexio causarum, non constant clarius, quam cum res ipsas ita recluseris, ut coram prodeant, ac velut tecum loquantur. Siquidem entia realia, duntaxat stantia, in suis primordialibus, & succedentibus in seminum Principiis, adeoque in verâ entitate Substantiali dant notitiam, & proferunt causam cognoscendi Naturam Corporum, mediorum & extremitatum, Quippe sunt cause generationis, existentiae & permutationis, secundum ipsorum radicem, quoniam (teste Raimundo) utcunque Logicus habeat profundum ingenium Argumentabile, aut Naturale, de rebus extrinsecis; tamen nunquam per aliquam rationem quæ venit ad sensum, poterit directè cognoscere, nec judicari, cum quali natura, aut virtute, per fortitudinem intrinsecus, habeat Multiplicatio grani, crescere super terram, nisi pro similitudinario ab observatione desumpto. Nec sciet unquam, quomodo semen in terra pullulet, crescat, & colligat fructum: Nisi cum doctrina experimentalis prius intraverit in nostram Philosophiam Naturalem, & non Sophisticam sermocinalem illam, quæ nascitur Logicis, per diversas præsumptiones Phantasticas; qui cum prognosticationibus sequellarum, contra vim Naturæ, faciunt multos pertinaciter errare in Sophisticatione mentis. Quia per nostram mechanicam Scientiam, intellectus est rectificatus,

ficatus, vi experientia, respectu oculi, & vera
notitia mentalis. Imo experientia nostra stant
supra probationes Phantasticas Conclusionum;
ideoque nec eas tolerant: Sed omnes alias Scientias
ostendunt vivaciter intrare in intellectum. Unde
deinceps intelligimus per Naturam, intus illud,
quod est, & quale est. Quia per talem Scientiam,
intellectus stat denudatus superfluitatibus & er-
roribus, qui ipsum ordinario removent à veritate,
propter presumptiones & præjudicata credita in con-
clusionibus. Hinc enim nostri se direxerunt ad
intrandum per quamlibet scientiam (in omnem
experientiam) per artem, juxta Naturæ cursum,
in suis univocis principiis. Spagyria enim sola
est speculum veri intellectus; monstratque tan-
gere, & videre veritates earum in claro lumine.
Nec fert argumenta logicalia, quia nimis remota
& longinqua, de claro lumine. Ideoque habet ta-
bula smaragdina: Per hoc genus demonstrandi, fu-
giet à te omnis obscuritas, & acquiritur tibi omnis
fortitudinis fortitudo fortis, vincens omnia subti-
lia, & solida penetrans. Propterea vocor Hermes
Trismegistus, habens tres (id est omnes) Partes
Philosophia, atque totius mundi Telemon; Hac
ille inter orare ergo & pulsare, supponitur Medium
in Naturalibus, querendi per ignem.